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|------------|--------------|
| EXAMINER | |
| VERDIER, C | |
| ART UNIT | PAPER NUMBER |

3745

DATE MAILED 10/16/00 *5*

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

660530-97-241250

Office Action Summary

Application No.

09/343,736

Applicant(s)

Spear, Deceased et al.

Examiner

Christopher Verdier

Group Art Unit

3745



☐ Responsive to communication(s) filed on _____.

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1-41 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☒ Claim(s) 1-3 is/are allowed.

☒ Claim(s) 4-41 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☒ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been
☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____.

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 3

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

Art Unit: 3745

Applicants' Affidavit under 37 CFR 1.132 dated January 5, 2000 has been carefully considered. The arguments for patentability of the claims set forth in the Affidavit are found to be persuasive, with the exception of the patent to Szydlowski, which was cited by Applicants in the original patent 5,642,985. Although Szydlowski is not specifically addressed in the Affidavit, Applicants have made a general statement that claim 30 is patentable in the reissue application because the prior art listed on form PTO-1449 does not disclose or suggest a supersonic turbomachinery blade with a leading edge that is swept in one direction (either rearward or forward) and a tip region that is translated in the other direction from its boundary with the intermediate region. The rejection of claim 30 based on Szydlowski is set forth later below.

Applicants have stated in the Affidavit that Rolls Royce Patent EP 801230 is not prior art to the present application, because it was published well after the filing date of the original patent 5,642,985. The examiner agrees with this statement.

Drawings

The drawings filed June 30, 1999 have been approved by the draftsman.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Art Unit: 3745

Claims 4-19 and 21-41 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 4, line 12, the recitation of the tip region being translated forward is inaccurate. Although the specification discloses that the tip region is translated forward compared to the prior art, figure 2 clearly shows that the tip region of the blade, compared to the rest of the blade, is not forward swept. One of ordinary skill in the art would not consider the tip of the blade in figure 2 to be forward swept. The geometry of the tip region should be claimed with some other geometrical relationship. In claim 10, line 10, "the beginning" lacks antecedent basis and is unclear as to which element this refers to. In claim 11, line 2, the recitation of the tip region being translated forward is inaccurate as above. In claim 12, line 2, the recitation the tip region being translated rearward is inaccurate. Although the specification discloses that the tip region is translated rearward compared to the prior art, figure 6 clearly shows that the tip region of the blade, compared to the rest of the blade, is not rearward swept. One of ordinary skill in the art would not consider the tip of the blade in figure 6 to be rearward swept. The geometry of the tip region should be claimed with some other geometrical relationship. In claim 16, line 3, the recitation of the tip region being translated forward is inaccurate as above. In claim 18, line 10, "the beginning" lacks antecedent basis and is unclear as to which element this refers to. In claim 18, line 12, the recitation of the tip region being translated forward is inaccurate as above. In claim 20, line 11, "the beginning" lacks antecedent basis and is unclear as to which element this refers to. In claim 21, line 2, the recitation of the tip

Art Unit: 3745

region being translated forward is inaccurate as above. In claim 24, line 2, the recitation of the tip region being translated rearward is inaccurate as above. In claim 27, last two lines, the recitation of the tip region being translated forward is inaccurate as above. In claim 30, lines 2-3, "the blade leading edge" lacks antecedent basis. In claim 30, lines 3-4, the recitation of the tip region being translated forward is inaccurate as above. In claim 36, lines 2-3, "the blade leading edge" lacks antecedent basis. In claim 36, lines 3-4, the recitation the tip region being translated rearward is inaccurate as above.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 10-11, 13-14, 15/10, 15/11, 15/13, 15/14, 18, 20-22, and 30, as far as the claims are definite, are rejected under 35 U.S.C. 102(b) as being anticipated by Hull. Note the blade 2, the leading edge to the left in figure 2, with the intermediate region near 2b, the tip region near 2c, with the intermediate region sweep angle not decreasing from the beginning to the outward boundary of the intermediate region, with the sweep angle throughout the tip being less than the sweep angle at the outward boundary of the intermediate region. The intermediate region is

Art Unit: 3745

swept rearward, and the tip is considered to be swept forward. The tip region angle decreases throughout the tip region. The intermediate region sweep angle increases throughout the intermediate region.

Claims 10, 12, 13-14, 15/10, 15/12, 15/13, 15/14, 20, 24-26, and 36-37, as far as the claim are definite, are rejected under 35 U.S.C. 102(b) as being anticipated by Cox (figure 10B).

Note the blade with the leading edge, the intermediate region, and the tip region, with the sweep angle of the intermediate region not decreasing from a beginning to the outward boundary of the intermediate region, with the sweep angle throughout the tip region being less than the sweep angle at the outward boundary of the intermediate region. The intermediate region is swept forward, and the tip is translated rearward. The tip region sweep angle decreases throughout the tip region. The intermediate region sweep angle increases throughout the intermediate region.

Claim 30, as far as it is definite, is rejected under 35 U.S.C. 102(b) as being anticipated by Szydlowski (figures 1-2). Note blade 1 with leading edge 18 having a rearward swept middle region near IV-IV and ending at a tip region that is translated forward from an end of the middle region.

Allowable Subject Matter

Claims 1-2, 3/1, and 3/2 are allowed.

Art Unit: 3745

No other indication of allowable subject matter may be made at this time, due to the indefinite nature of the claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Verdier whose telephone number is (703) 308-2638. The examiner can normally be reached on Monday-Friday from 9:00 a.m. to 5:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Look, can be reached on (703) 308-1044. The fax phone number for this Group is (703) 305-3588.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0861.

CV
October 6, 2000



Christopher Verdier
Primary Examiner
Art Unit 3745